

**FM Translator W264DT CP BNPFT-20180731AAA**  
**CH 264D – 100.7 MHz – 0.200 kW**  
**Clyde, NC**

**Proposed**  
**CH 264D – 100.7 MHz – 0.220 kW**  
**Clyde, NC**

**June 25, 2021**

### **Technical Narrative**

This Technical Narrative and attached exhibits were prepared on behalf of Auslator, LLC, (“Auslator”), permittee of FM translator construction permit BNPFT-20180731AAA for W264DT, Facility ID No. 137976, Clyde, North Carolina. Auslator herein is filing a minor mod application to modify W264DT construction permit BNPFT-20180731AAA. The purpose of this construction permit modification is to change the transmit location to a nearby tower 150 feet in overall height that is not registered with an Antenna Structure Registration (ASR) number.

W264DT will be used as a fill-in translator for full power FM station WOXL-FM, Facility ID No. 37242, Biltmore Forest, NC. Auslator has obtained written retransmission consent from Saga Communications Corporation of North Carolina LLC, licensee of WOXL-FM. The modified W264DT would operate on Channel 264D (100.7 MHz) with 220 watts ERP directional with the transmit antenna located at 10 meters height above ground level, 1374 meters AMSL and 456.77 meters HAAT. An exhibit demonstrates that the proposed FCC F(50,50) 60 dBu contour of the new facility is contained within the WOXL-FM 60 dBu contour. Therefore it is believed that this application is in compliance with Section 74.1201(g) of the Commission’s rules. The Class A FM Channel Study that is included as an exhibit is provided as a convenience to FCC staff to help identify potential contour protection issues. Section 74.1204 contour protection are included for co-channel LPFM station WRES-LP, Channel 264L1, Ashville, NC, co-channel full power FM station WBGQ, Channel 264A, Bulls Gap, TN, first adjacent full power FM station WSSL-FM, channel

263C0, Gray Court, SC and co-channel LPFM station WTIJ-LP, Channel 264L1, Bryson City, NC

The current W264DT cp tower site and the proposed site are only 61 meters apart. Therefore, an exhibit showing compliance with Section 74.1233(a) "Common Overlap" is not included. Exhibits are included to demonstrate compliance with RF exposure limits and Section 106 (Environmental).

**W264DT CP Mod**

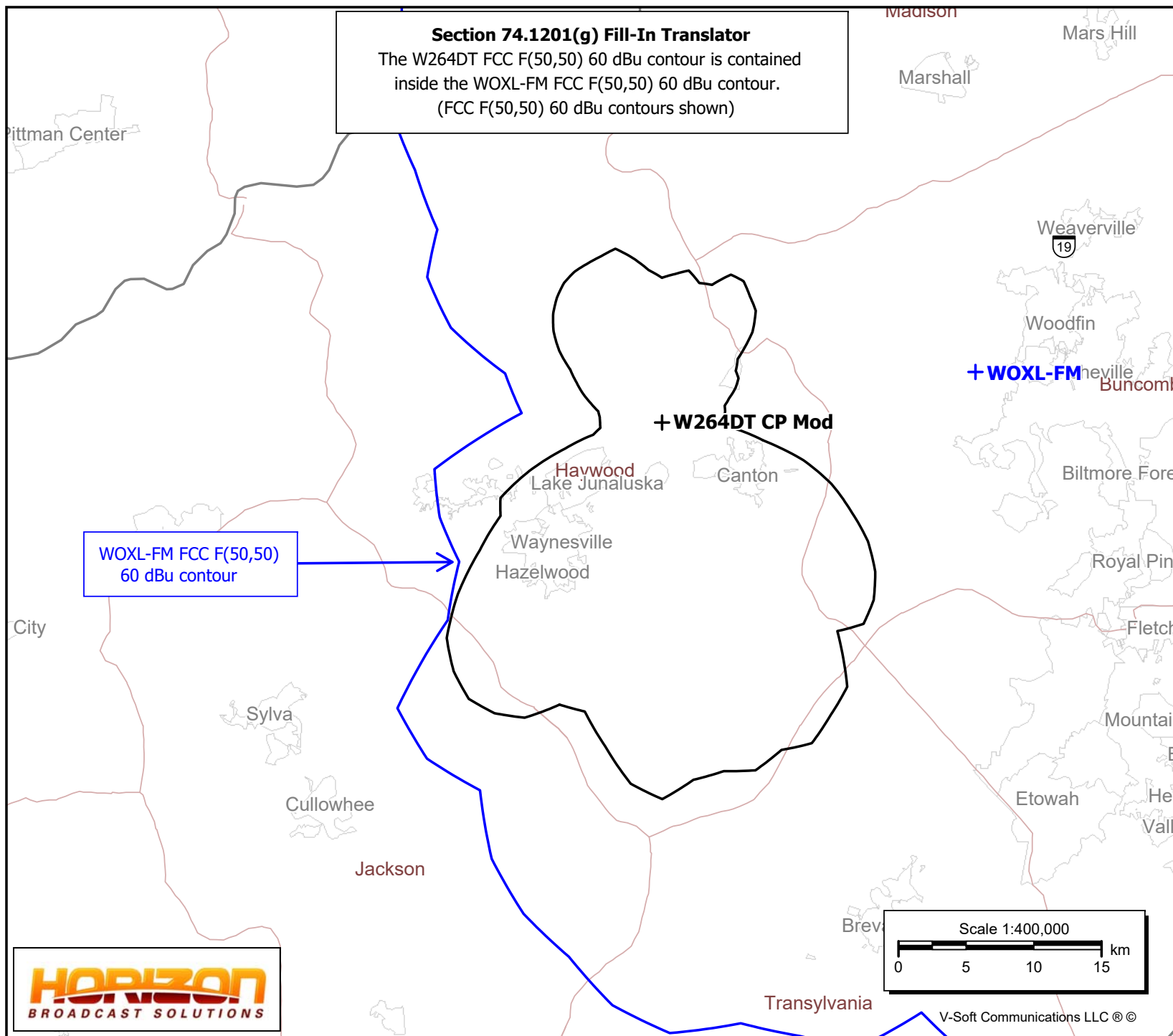
Clyde, NC  
BNPFT20180731AAA  
Latitude: 35-34-04.70 N  
Longitude: 082-54-25.60 W  
ERP: 0.22 kW  
HAAT: 456.77 m  
Channel: 264  
Frequency: 100.7 MHz  
AMSL Height: 1374.0 m  
Elevation: 1364.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: FCC Model  
Loc. Variability: 50.0%  
Time Variability: 50.0%  
HAAT Mthd: FCC

**WOXL-FM**

Biltmore Forest, NC  
BLH20160926ADQ  
Latitude: 35-36-04.40 N  
Longitude: 082-39-06.50 W  
ERP: 9.50 kW  
HAAT: 339 m  
Channel: 243  
Frequency: 96.5 MHz  
AMSL Height: 1064.0 m  
Elevation: 1010.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: None

**Section 74.1201(g) Fill-In Translator**

The W264DT FCC F(50,50) 60 dBu contour is contained inside the WOXL-FM FCC F(50,50) 60 dBu contour.  
(FCC F(50,50) 60 dBu contours shown)



**HORIZON**  
BROADCAST SOLUTIONS

Scale 1:400,000  
0 5 10 15 km

V-Soft Communications LLC ©

# **W264DT Class A FM Channel Study**

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REFERENCE                                     DISPLAY DATES
35 34 04.7 N.                               CLASS = A   Int = AA   DATA   06-24-21
82 54 25.6 W.                               Current Spacings to 3rd Adj.  SEARCH 06-25-21
----- Channel 264 - 100.7 MHz -----
Call      Channel  Location      Azi      Dist      FCC      Margin
  Lat.      Lng.      Ant      Power      HAAT
-----
W264DT    CP -D 264D   Clyde      NC   307.8    0.1    84.5    -84.4
  35 34 05.9   82 54 27.5   DVN      0.200 kW   0 M
    Auslator, LLC

WRES-LP   LIC   264L1   Asheville      NC   84.2    32.1    66.5    -34.4
  35 35 48.4   82 33 17.4   CN      0.094 kW   31 M
    Empowerment Resource Cente  BLL20040127ADI
Note: See Section 74.1204 Contour Protection: WRES-LP

WBGQ      LIC-N 264A   Bulls Gap      TN   344.9    93.4    114.5    -21.1
  36 22 48.3   83 10 46.6   NCN      0.330 kW   384 M
    Cherokee Broadcasting      BLH20010122AAF
Note: See Section 74.1204 Contour Protection: WBGQ

WSSL-FM   LIC-N 263C0   Gray Court      SC   146.6    132.2    151.5    -19.3
  34 34 18.4   82 06 43.4   NCN     100.000 kW   381 M
    Ihm Licenses, LLC          BLH20050923AFT
Note: See Section 74.1204 Contour Protection: WSSL-FM

WTIJ-LP   LIC   264L1   Bryson City      NC   251.6    51.6    66.5    -14.9
  35 25 12.3   83 26 48.5   CN      0.100 kW   -200 M
    Grace Christian Academy     BLL20151216AFX
Note: See Section 74.1204 Contour Protection: WTIJ-LP

WHSP-LP   LIC   265L1   Black Mountain   NC   84.5    53.1    55.5    -2.5
  35 36 45.4   82 19 27.4   CN      0.100 kW   -48 M
    Church Of The Incarnation   BLL20170125AGJ

WZJS      LIC   264A   Banner Elk      NC   53.2    115.2    114.5     0.8
  36 11 03.4   81 52 47.4   CN      0.150 kW   593 M
    High Country Adventures, L  BLH20080422AAN

WUSY      LIC   264C0   Cleveland      TN   260.2    219.8    214.5     5.3
  35 12 26.3   85 17 09.9   CN     100.000 kW   363 M
    Entercom License, LLC      BLH19890711KC

W266CP    LIC-D 266D   Candler      NC   96.8    37.5    25.5    12.0
  35 31 39.4   82 29 48.4   DVN      0.250 kW   0 M
    Ihm Licenses, LLC          BLFT20180530AAD

W262CO    LIC-D 262D   Asheville      NC   96.8    37.6    25.5    12.1
  35 31 39.4   82 29 45.4   DCN      0.250 kW   0 M
    Saga Communications Of Nor  BLFT20150526ABH

W267AD    APP-D 267D   Cherokee      NC   235.5    47.2    25.5    21.7
  35 19 38.3   83 20 08.5   DCN      0.250 kW   0 M
    Blue Ridge Broadcasting Co  0000125599

W267AD    LIC-D 267D   Cherokee      NC   235.5    47.2    25.5    21.7
  35 19 38.3   83 20 08.5   DCN      0.114 kW   0 M
    Blue Ridge Broadcasting Co  BLFT20160613AAE

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Call	Channel	Location		Azi	Dist	FCC	Margin
Lat.	Lng.	Ant	Power		HAAT		
W264CJ	LIC-D 264D	Knoxville	TN 295.5	107.9	84.5	23.4	
35 58 50.0	83 59 15.0	DCN	0.250 kW 0 M				
Ra-Tel Broadcasting Compan BLFT20160422AAS							
W264BY	LIC-D 264D	Kingsport	TN 15.0	110.3	84.5	25.8	
36 31 37.3	82 35 10.5	DVN	0.070 kW	270 M			
Appalachian Educational Co BLFT20081007ADC							
WJFS-LP	LIC 266L1	Gatlinburg	TN 291.4	54.5	28.5	26.0	
35 44 43.3	83 28 06.5	CN	0.100 kW	29 M			
Gatlinburg Church Of Chris BLL20180511AAS							
W265AZ	CP -D 265D	Franklin	NC 234.5	75.3	33.5	41.8	
35 10 24.3	83 34 51.5	DCN	0.200 kW 0 M				
Radio Training Network, In BPFT20180927ABU							
W265AZ	LIC 265D	Franklin	NC 234.5	75.3	33.5	41.8	
35 10 24.3	83 34 51.5	CN	0.010 kW	679 M			
Radio Training Network, In BLFT19971229TH							
WROQ	LIC-D 266C1	Anderson	SC 150.3	117.5	74.5	43.0	
34 38 51.4	82 16 12.4	DCN	100.000 kW	269 M			
Entercom License, LLC BLH20180817AAD							
WCYQ	LIC 262C	Oak Ridge	TN 300.8	138.5	94.5	44.0	
36 11 54.2	84 13 51.7	CN	98.000 kW	618 M			
Sm-Wcyq, LLC BMLH20170117AEC							
WEPR	LIC 211C	Greenville	SC 146.9	82.9	28.5	54.4	
34 56 29.4	82 24 37.4	CN	85.000 kW	361 M			
South Carolina Educational BMLED20100628BQG							
W266DO	LIC-D 266D	Spruce Pine	NC 64.2	80.5	25.5	55.0	
35 52 48.4	82 06 15.4	DCN	0.170 kW 0 M				
Mountain Valley Media, Inc 0000127266							
W265DW	LIC-D 265D	Rutherfordton	NC 102.0	91.4	33.5	57.9	
35 23 35.4	81 55 22.4	DCN	0.250 kW 0 M				
Isothermal Broadcasting Co BLFT20190613AAN							
W265CI	LIC-D 265D	Piney Grove	TN 33.2	93.2	33.5	59.7	
36 16 09.4	82 20 16.5	DCN	0.010 kW	389 M			
Positive Alternative Radio BLFT20130402AAL							

**W264DT CP Mod**

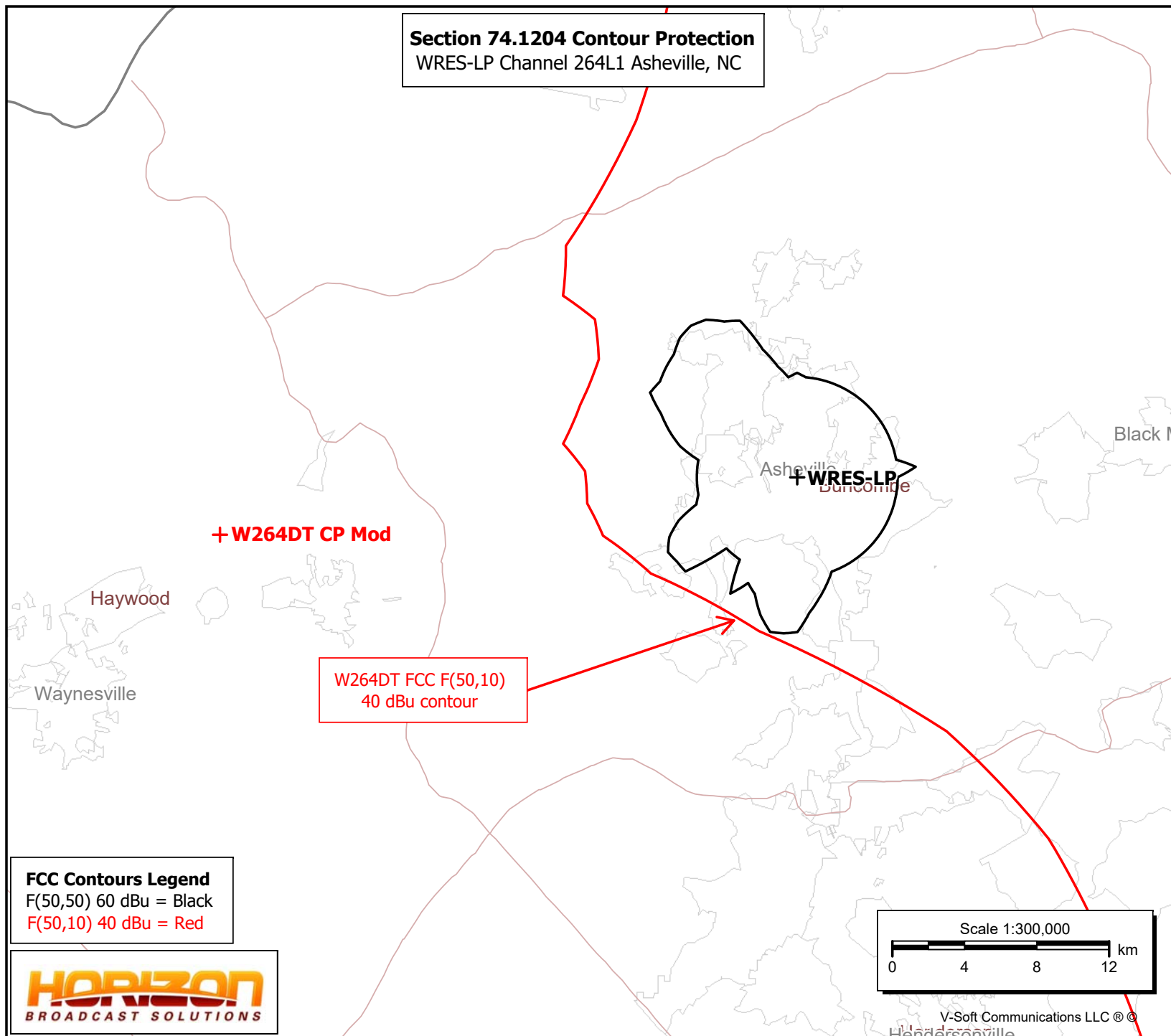
Clyde, NC  
BNPFT20180731AAA  
Latitude: 35-34-04.70 N  
Longitude: 082-54-25.60 W  
ERP: 0.22 kW  
HAAT: 456.77 m  
Channel: 264  
Frequency: 100.7 MHz  
AMSL Height: 1374.0 m  
Elevation: 1364.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: FCC Model  
Loc. Variability: 50.0%  
Time Variability: 50.0%  
HAAT Mthd: FCC

**WRES-LP**

Asheville, NC  
BLL20040127ADI  
Latitude: 35-35-48.40 N  
Longitude: 082-33-17.40 W  
ERP: 0.094 kW  
HAAT: 30.71 m  
Channel: 264  
Frequency: 100.7 MHz  
AMSL Height: 718.0 m  
Elevation: 677.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: FCC Model  
Loc. Variability: 50.0%  
Time Variability: 50.0%  
HAAT Mthd: FCC

**Section 74.1204 Contour Protection**

WRES-LP Channel 264L1 Asheville, NC

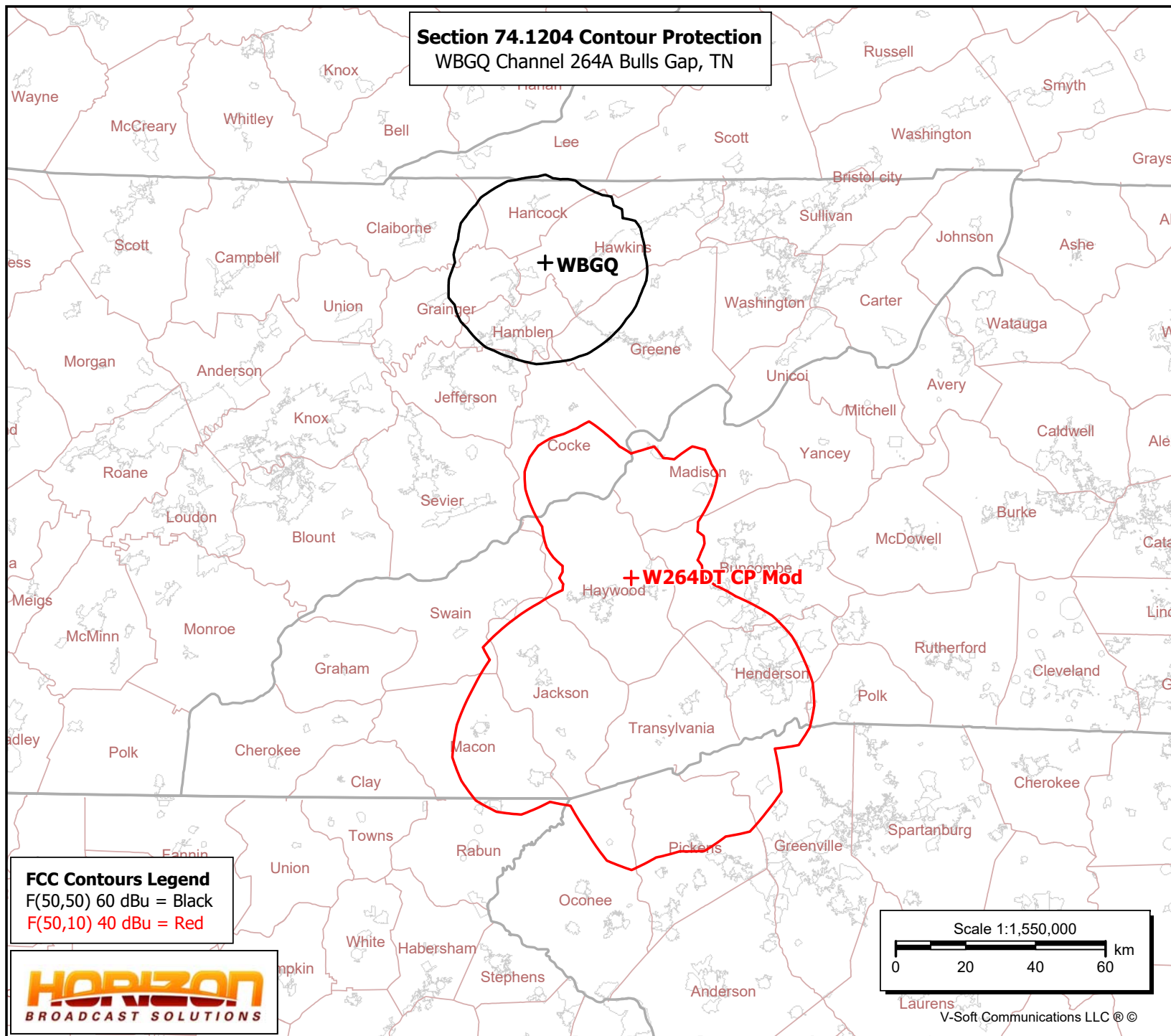


**W264DT CP Mod**

Clyde, NC  
BNPFT20180731AAA  
Latitude: 35-34-04.70 N  
Longitude: 082-54-25.60 W  
ERP: 0.22 kW  
HAAT: 456.77 m  
Channel: 264  
Frequency: 100.7 MHz  
AMSL Height: 1374.0 m  
Elevation: 1364.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: FCC Model  
Loc. Variability: 50.0%  
Time Variability: 50.0%  
HAAT Mthd: FCC

**WBGQ**

Bulls Gap, TN  
BLH20010122AAF  
Latitude: 36-22-48.30 N  
Longitude: 083-10-46.60 W  
ERP: 0.33 kW  
HAAT: 384 m  
Channel: 264  
Frequency: 100.7 MHz  
AMSL Height: 809.0 m  
Elevation: 786.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: FCC Model  
Loc. Variability: 50.0%  
Time Variability: 50.0%  
HAAT Mthd: FCC

**Section 74.1204 Contour Protection**  
**WBGQ Channel 264A Bulls Gap, TN****FCC Contours Legend**

F(50,50) 60 dBu = Black

F(50,10) 40 dBu = Red

**HORIZON**  
BROADCAST SOLUTIONS

Scale 1:1,550,000

0 20 40 60 km

Laurens  
V-Soft Communications LLC ©

**W264DT CP Mod**

Clyde, NC  
BNPFT20180731AAA  
Latitude: 35-34-04.70 N  
Longitude: 082-54-25.60 W  
ERP: 0.22 kW  
HAAT: 456.77 m  
Channel: 264  
Frequency: 100.7 MHz  
AMSL Height: 1374.0 m  
Elevation: 1364.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: FCC Model  
Loc. Variability: 50.0%  
Time Variability: 50.0%  
HAAT Mthd: FCC

**WSSL-FM**

Gray Court, SC  
BLH20050923AFT  
Latitude: 34-34-18.40 N  
Longitude: 082-06-43.40 W  
ERP: 100.00 kW  
HAAT: 381 m  
Channel: 263  
Frequency: 100.5 MHz  
AMSL Height: 587.0 m  
Elevation: 239.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: FCC Model  
Loc. Variability: 50.0%  
Time Variability: 50.0%  
HAAT Mthd: FCC

**FCC Contours Legend**

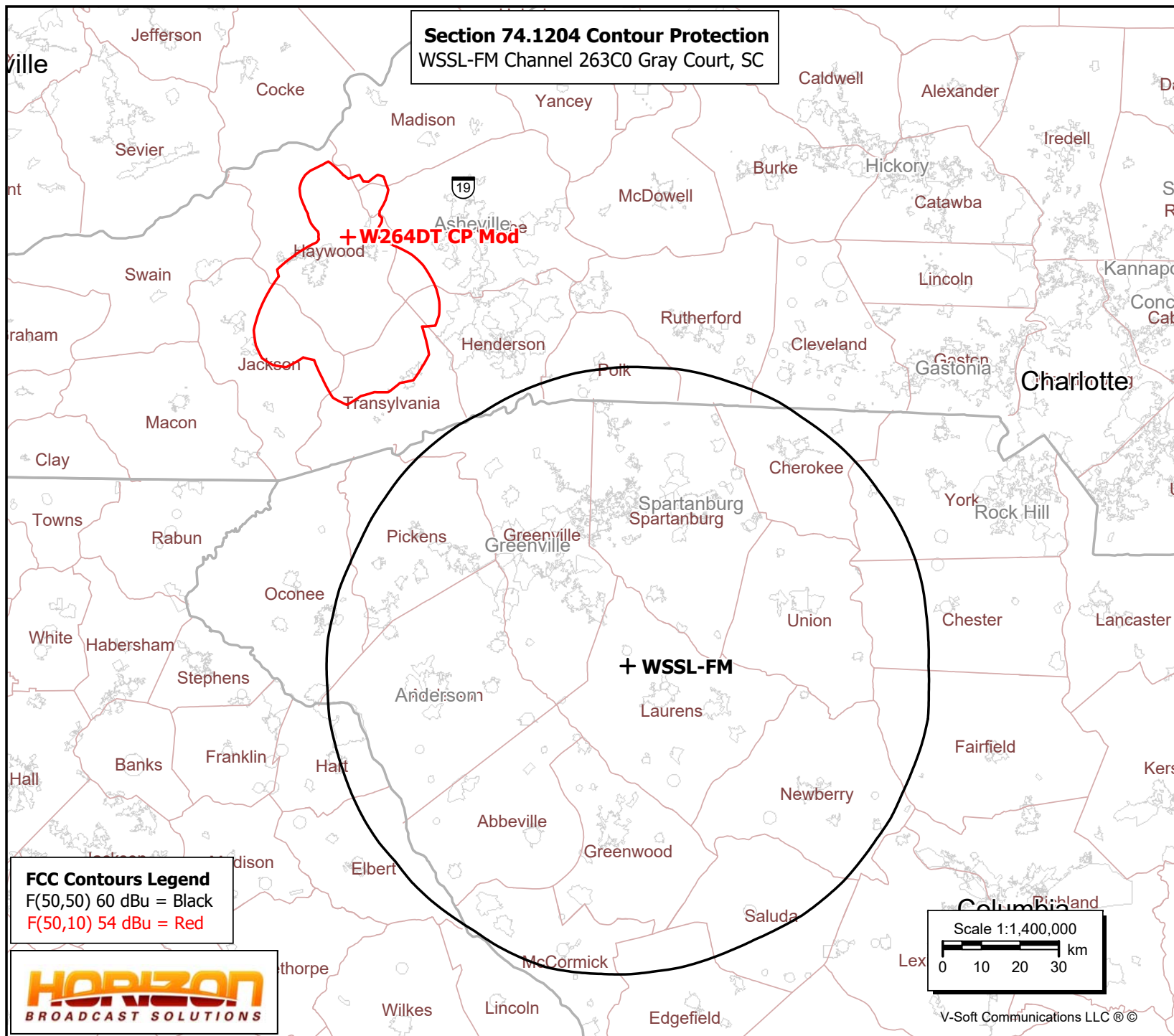
F(50,50) 60 dBu = Black

F(50,10) 54 dBu = Red

**HORIZON**  
BROADCAST SOLUTIONS

**Section 74.1204 Contour Protection**

WSSL-FM Channel 263C0 Gray Court, SC



Scale 1:1,400,000  
0 10 20 30 km

V-Soft Communications LLC ©

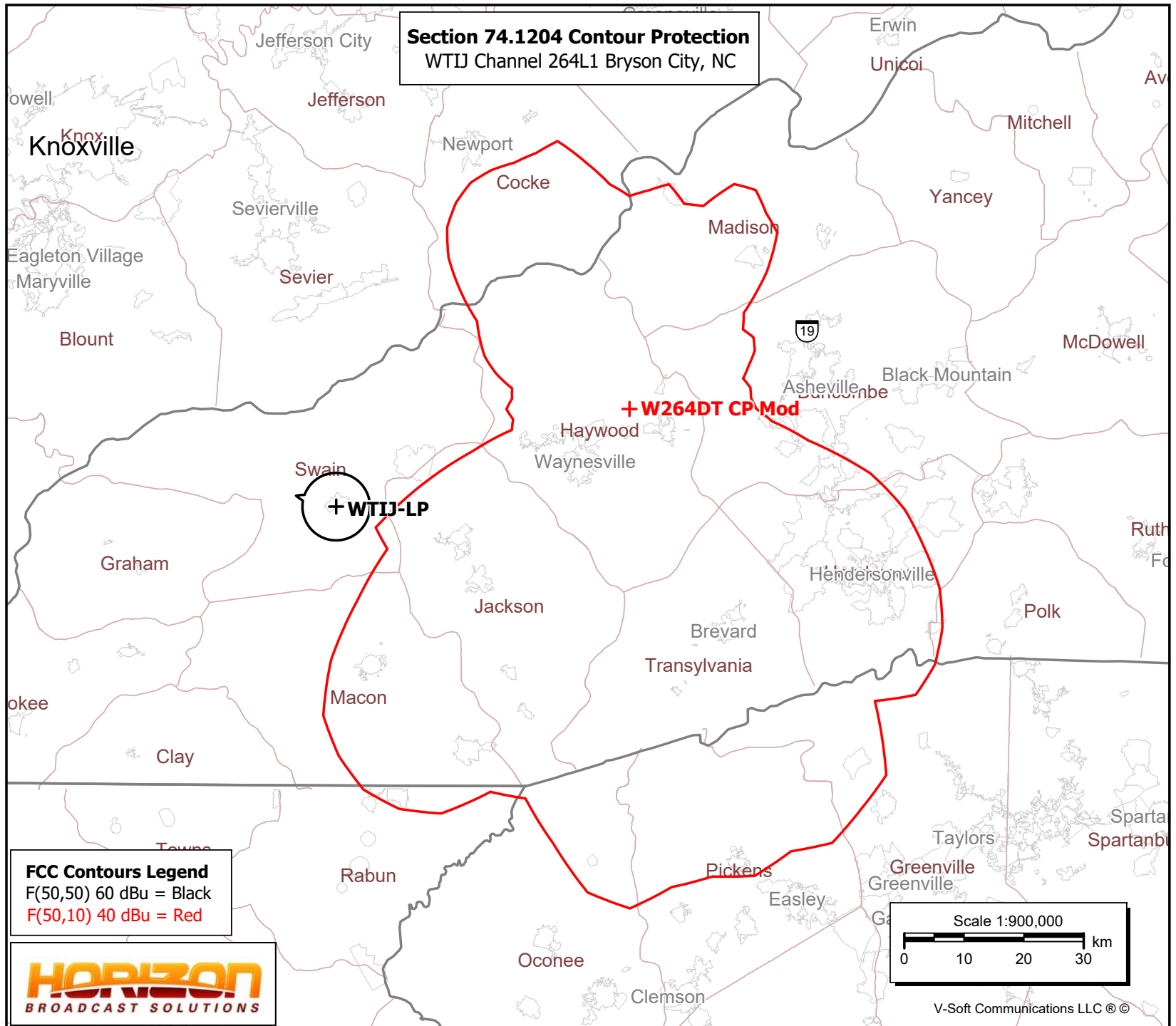


**W264DT CP Mod**

Clyde, NC  
BNPFT20180731AAA  
Latitude: 35-34-04.70 N  
Longitude: 082-54-25.60 W  
ERP: 0.22 kW  
HAAT: 456.77 m  
Channel: 264  
Frequency: 100.7 MHz  
AMSL Height: 1374.0 m  
Elevation: 1364.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: FCC Model  
Loc. Variability: 50.0%  
Time Variability: 50.0%  
HAAT Mthd: FCC

**WTIJ-LP**

Bryson City, NC  
BLL20151216AFX  
Latitude: 35-25-12.30 N  
Longitude: 083-26-48.50 W  
ERP: 0.10 kW  
HAAT: -200 m  
Channel: 264  
Frequency: 100.7 MHz  
AMSL Height: 626.0 m  
Elevation: 605.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: FCC Model  
Loc. Variability: 50.0%  
Time Variability: 50.0%  
HAAT Mthd: FCC

**Section 74.1204 Contour Protection**  
WTIJ Channel 264L1 Bryson City, NC

## **Human Exposure to Radiofrequency Electromagnetic Field & Section 106 Compliance (Environmental)**

A study has been made to determine whether this proposal is in compliance with 47 C.F.R. 1.1307 of the Commission's rules and with OET Bulletin #65, dated August 1997, regarding human exposure to radio frequency radiation in the vicinity of broadcast towers. Auslator LLC, ("Auslator"), proposes to modify construction permit BNPFT-20180731AAA for W264DT, Facility ID No. 137976, Channel 264D, Clyde, NC. W264DT will simulcast FM station WOXL-FM, Facility ID No. 37242, Biltmore Forest, NC. The tower is located at 35° 34' 04.7" N ~ 82° 54' 25.6" W (NAD 83). The tower is 45.7 meters in overall height and is not registered with an Antenna Registration Structure "ASR" number. The proposed antenna is a side mounted Kathrein-Scala CA2-FM one bay horizontally polarized directional antenna with a center of radiation of 10 meters AGL. W264DT would operate on Channel 264D, 100.7 MHz, with 220 watts ERP directional at 456.77 meters HAAT. The use of existing transmitting locations has been characterized as being environmentally preferable by the Commission, according to Note 1 of § 1.1306 of the FCC Rules. Because the proposed new facility proposes to operate from an existing tower and no modifications to the tower are being change, it is believed to be exempt from a Section 106 review by the SHPO/THPO.

The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the Commission's OET Bulletin Number 65. The Kathrein-Scala antenna is not included in the revised OET FM Model Program. Therefore Type 1, Ring-and-stub, or any type not-otherwise described is used as a worst case scenario. Using Antenna Type 1, the maximum calculated signal density near the tower at two meters above ground level attributable to the proposed facility is  $31.865 \mu\text{W}/\text{cm}^2$  at 4.6 meters, which is 15.93 percent of the general population/uncontrolled maximum permitted exposure limit.

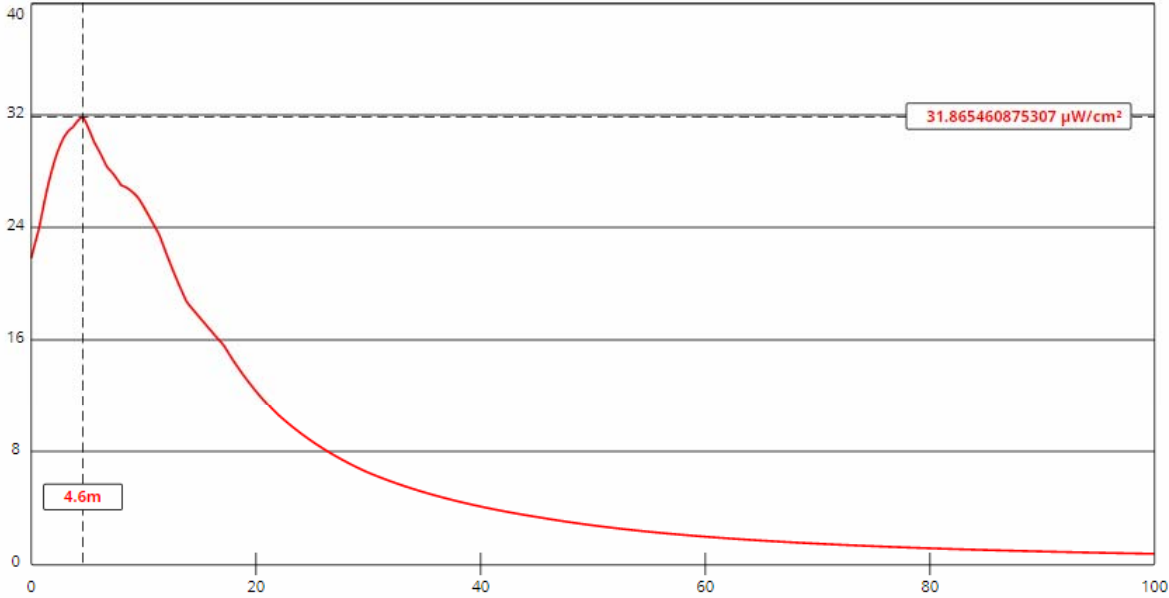
The applicant will see that signs are posted in the vicinity of the tower, warning of potential radio frequency hazards at the site. The applicant will cooperate with other users of the tower to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the Federal Communications Commission should anyone be required to climb the tower for maintenance or inspection.

# FM Model

- Radio Frequency Safety
- FCC Policy on Human Exposure
- RF Safety FAQ
- Body Tissue Dielectric Parameters
- RF Safety Highlighted Releases
- FM Model

The FM Model calculator determines the potential exposure from radiofrequency (RF) electromagnetic fields produced by FM broadcast station antennas at ground level. The FM Model software was originally developed by the FCC in 1997 as a standalone executable program and this improved version provides more precise predictions and runs via a JavaScript enabled web browser. The FM Model is originally based on measured data published in 1985 by the EPA.

Show More....



View Tabular Results +

Channel Selection	Channel 264 (100.7 MHz) ▼		
Antenna Type +	EPA Type 1: Ring-and-Stub or "Other" ▼		
Height (m)	<input type="text" value="10"/>	Distance (m)	<input type="text" value="100"/>
ERP-H (W)	<input type="text" value="220"/>	ERP-V (W)	<input type="text" value="0"/>
Num of Elements	<input type="text" value="1"/>	Element Spacing (λ)	<input type="text" value="1"/>
Num of Points	<input type="text" value="500"/>	<input type="button" value="Apply"/>	